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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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11/01/2005

Peter Anderegg

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NATH & ASSOCIATES  
112 South West Street  
Alexandria, VA 22314

EXAMINER

STEELE, JENNIFER A

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

03/31/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/551,382	<b>Applicant(s)</b> ANDEREGG, PETER	
	<b>Examiner</b> JENNIFER STEELE	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a) because they fail to show or equate the density quota K% of Fig. 3d with the weight quota as claimed and as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 1 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "continuously changing weight quota" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. As Figure 3d describes a density quota K% it is not clear that a weight quota is equated with a density quota and that quota is equated with percentage. If the weight quota is the percent of microfibers as to the whole fibers or just to the coarse fiber the terms of weight quota and density quota or percent are indefinite. Further the term continuously would represent a density or weight that would be different at each point in the structure. The graph indicates portions where the density or weight would be the same as the line appears flat or straight.
2. Claim 1 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "predetermined" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. While the Figures and the specification describe a nonwoven comprising a skeleton of coarse fibers with microfibers that are hydroentangled and then melted onto the skeleton of coarse fibers, the claim and the specification does not describe how or why this becomes a "predetermined" bending stiffness. The term "predetermined" is

defined as to impose a direction or tendency on beforehand or to determine beforehand.

The claim limitations are required to describe the structure of the nonwoven and to the extent that the term "predetermined" means to determine the bending stiffness beforehand does not limit the structure of the nonwoven.

3. Claim 1 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The reference to porous fibrous skeleton (2) and surface region (4,10) and melt-on microfibrinous material (7) is indefinite because it is unclear which figure the claim is referring to and does not specifically describe the claim limitation without reference to the figures submitted with the application. The claimed structure of the skeleton and surface region is not clearly set forth in the claims. The figures show a structure wherein a changing percentage of microfibers are present throughout the length or thickness of the nonwoven. Wherein sections 10, 19 and 4 may comprise a certain length, height or width or percentage of the nonwoven, the claims are indefinite.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claim 1, 2, 6, 7, 11, 13-15 and 20 rejected under 35 U.S.C. 102(b) as being anticipated by Swan et al. (US 5,773,375). Swan anticipates an acoustically effective nonwoven comprising coarse polyester staple fibers (col. 4, lines 31-40) and polypropylene meltblown microfibers (col. 3, lines 12-26). The acoustic nonwoven insulation fabric anticipates the air flow resistance of claim 1 and teaches an air flow pressure drop (col. 3, lines 20-27). The nonwoven acoustical insulation web can be thermally consolidated to form reduced thickness areas (col. 3, lines 40-45). As to the amended claim 1, Swan teaches that the microfibers and coarse fibers and teaches the structure is thermoformed which applies heat and will thermally bond the microfibers and the coarse fibers and as such can be equated with melted-on microfibrinous material (col. 6, lines 35-40). Swan further teaches areas of reduced thickness which would be areas of different and changing density and is equated with Applicant's limitation continuously changing weight quota and where there are regions of the fibrous skeleton comprising said melt-on microfibrinous material.

As to Claim 2 rejected under 35 U.S.C. 102(b) as being anticipated by Swan et al. (US 5,773,375). Swan anticipates coarse fibers with a 1-35 dtex and references a 1-35 denier fiber (col. 4, lines 31-40).

Regarding Claim 6 and 20 rejected under 35 U.S.C. 102(b) as being anticipated by Swan et al. (US 5,773,375). Swan anticipates meltblown microfibers of polypropylene, copolymers and blends of polypropylene and blend of compatible polyolefins (col. 4, lines 23-30).

With regards to Claim 7 rejected under 35 U.S.C. 102(b) as being anticipated by Swan et al. (US 5,773,375). Swan anticipates coarse fibers of higher melting point and teaches polyester fibers that have a higher melting point than polypropylene microfibers.

As to Claim 11 rejected under 35 U.S.C. 102(b) as being anticipated by Swan et al. (US 5,773,375). Swan anticipates an air impermeable layer and teaches a film layer (14) that is a water barrier layer (col. 5, lines 63-67).

Regarding claim 13 -15, Swan teaches coarse fibers that are staple fibers that are about 3-35 dtex. (col. 4, lines 31-35).

### ***Claim Rejections - 35 USC § 102/103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claim 4, 5, 8, 9, 18, 19 and 22-25 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Swan et al. (US 5,773,375). Swan teaches melt-blown microfibers generally about 1 to 25 microns in diameter which is equated to 0.4 to 1 dtex. As to the limitation of non-melted on fibers versus melted on fibers, Swan teaches that melt-blown microfibers in the laminate and teaches varying layer thicknesses based on the process of thermoforming the laminate

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and therefore it is reasonable to presume that there are melted and non-melted microfibers.

Regarding Claim 8, 22-24 Swan teaches an air flow pressure drop of at least about 1 mm water at a flow rate of about 32 liters/min. Swan does not teach the air flow resistance in the units of  $N/m^3$  and a value of 200-60,000  $N/m^3$ , between 800-35,000  $N/m^3$  and preferably between 1,000 to 20,000  $N/m^3$ . When the reference discloses all the limitations of a claim except a property or function, and the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention the examiner has basis for shifting the burden of proof to applicant as in *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980). See MPEP §§ 2112- 2112.02.

As to Claim 9 and 25, Swan teaches an acoustic panel for use in motor vehicles that can be pressure molded and heated to form to the contours of a motor vehicle door. Swan does not teach a stiffness property, however the invention of Swan as described inherently has a stiffness. When the reference discloses all the limitations of a claim except a property or function, and the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention the examiner has basis for shifting the burden of proof to applicant as in *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980). See MPEP § 2112- 2112.02.

***Claim Rejections - 35 USC § 103***



The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
6. Claim 3, 16 and 17 rejected under 35 U.S.C. 103(a) as being unpatentable over Swan et al. (US 5,773,375) in view of Ista et al. (US 7,195,814). Swan differs from the current application and does not teach spunbonded fibers. Ista teaches microfiber entangled products and methods of producing microfiber products that incorporate microfiber materials and other materials (ABST). Ista teaches the materials that are produced to meet the need for new and creative product constructions (col. 1, lines 21-26). Ista teaches products for a variety of uses, including acoustic insulation (col. 21, lines 52-59). Ista teaches a microfiber material and second material that is not a microfiber material (col 18, lines 14-44). Ista teaches a second material can include materials that are in the form of screens; meshes; open-cell foams; spunbonds; roving

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yarns or filaments; knit, woven, or non-woven (including dry laid, wet laid, spunbonded, and melt-blown) constructions; or any other feature of size-scale that allows entanglement with a microfiber (col. 18, lines 14-44). Ista teaches that different materials of a microfiber-entangled product can be selected to include one or more microfiber-forming layer and one or more layers that is not a microfiber-forming layer to give a combination of properties from the different layers. The properties include hydrophobicity, hydrophilicity or a mechanical property such as rigidity, flexibility (col. 2, lines 61-67). Ista teaches the coarse spunbond fibers can be polypropylene (col. 25, lines 35) and teaches that the second material, which can be the spunbond fabric can be made from polyester (claim 16).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine a spunbond material of polyester polymer with microfibers motivated to produce an acoustic insulation panel with specific properties of air resistance and rigidity.

7. Claim 10 rejected under 35 U.S.C. 103(a) as being unpatentable over Swan et al. (US 5,773,375) in view of Ista et al. (US 7,195,814). Swan differs from the current application and teaches a scrim outer layer (52) and a film (14) but does not teach another nonwoven layer. Ista teaches a second material can include materials that are in the form of screens; meshes; open-cell foams; spunbonds; roving yarns or filaments; knit, woven, or non-woven (including dry laid, wet laid, spunbonded, and melt-blown) constructions; or any other feature of size-scale that allows entanglement with a microfiber (col. 18, lines 14-44). Ista teaches that different materials of a microfiber-

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entangled product can be selected to include one or more microfiber-forming layer and one or more layers that is not a microfiber-forming layer to give a combination of properties from the different layers. The properties include hydrophobicity, hydrophilicity or a mechanical property such as rigidity, flexibility (col. 2, lines 61-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a nonwoven layer as taught by Ista instead of the scrim layer of Swan motivated to produce an acoustic insulation panel with combination of properties as taught by Ista.

8. Claim 12 and 21 rejected under 35 U.S.C. 103(a) as being unpatentable over Swan et al. (US 5,773,375) in view of Sandoe et al. (US 6,756,332). Swan differs from the current application and does not teach a decorative layer. Sandoe teaches a vehicle headliner and laminate that is comprised of layers of materials including a core layer of nonwoven fibers of fine denier that improve sound absorption and stiffening layers of coarser fibers than in the core layer. Sandoe teaches one of the reinforcing material layers has a decorative cover that is exposed to the interior, or passenger side of the motor vehicle (col. 1, lines 65-68).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a decorative layer to the acoustical panel of Swan motivated to produce a motor vehicle insulation panel that is pleasing to the passenger.

As to claim 21, Swan does not teach microfibers that are polyester or co-polyester. Sandoe teaches fine fibers that can be of polyester (col. 4, lines 50-56).

***Response to Arguments***

9. Applicant's arguments filed 12/18/2007 have been fully considered but they are not persuasive. Applicant arguments that the 35 USC 112 rejection with respect to the term "continuously changing weight quota" are not persuasive. The Applicant directed the Examiner to Figure 3d which shows a density quota K. Examiner has maintained this rejection because it is unclear if the term density is equated with the term weight and the specification does not clarify these terms.

10. Applicant arguments that the 35 USC 112 rejection with respect to the term "predetermined" are not persuasive. As described in the Office Action above, the term predetermined infers that there is another variable or variables that effect the air flow resistance and as these factors are not disclosed or cited in the claim, the term is indefinite.

11. Applicants claim amendments with respect to the 35 USC 112 rejection that claims 1-3, 5,6,8 and 9 are indefinite because of a broad range together with a narrow range are persuasive and the rejection has been withdrawn.

12. Applicant arguments that the 35 USC 112 rejection with respect to the claim limitation of a "surface region" and that the surface region is not defined in the claim without reference to the drawing are not persuasive. As Applicant directs Examiner to the figures and added the limitation "a region of the fibrous skeleton comprising said melted-on microfibers", a region is a broad term that does not describe whether the region is 0% or 100% of the structure. The term merely states that there can be a

region or portion of the structure where there are melted on microfibers and not whether the melted on microfiber cover the surface or penetrate the depth of the structure.

13. Applicant's arguments that the non-melted fibers do not require an antecedent basis are persuasive and the previous 35 USC 112 rejection is withdrawn.

14. Applicant's arguments and claim amendments with respect to the 35 USC 102(b) rejection to Swan are not persuasive. As noted above, Swan teaches a laminate with microfibers and coarse fibers that are thermoformed so as to melt the fibers and thermoformed so that regions of the laminate are thinner and therefore have a changing density throughout the structure.

15. Applicant's arguments with respect to the 35 USC 103(a) rejection to Swan in view of Ista are not persuasive. Wherein Applicant argues that Ista discloses a micro-fiber entangled product but fails to teach or suggest the features of claim 1. Ista is relied upon for teaching that a spunbonded fiber or web can be used with a microfiber layer and can be entangled to produce a thermal or acoustical insulation. Ista presents a finding that one of ordinary skill in the art could of substituted staple fibers with spunbonded fibers and entangled a microfiber web with a reasonable expectation of success.

16. Applicant's arguments with respect to the 35 USC 103(a) rejection to Swan in view of Sandoe are not persuasive. Sandoe is relied upon to teach the feature of adding a decorative layer to an acoustical insulation laminate. Sandoe further teaches a core layer of coarse and fine fiber and stiffening layers that are batt fibers comprised of coarse and fine fibers that provide flexural rigidity for the laminate. Sandoe presents

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a finding that it would have been obvious to employ a decorative layer in an acoustical laminate.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JENNIFER STEELE whose telephone number is (571)272-7115. The examiner can normally be reached on Office Hours Mon-Fri 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. S./  
Examiner, Art Unit 1794

/Elizabeth M. Cole/  
Primary Examiner, Art Unit 1794

3/26/2008